Page 1

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STRUCTURE FILE UPDATES: 13 AUG 2003 HIGHEST RN 566135-25-9
-DICTIONARY FILE UPDATES: 13 AUG 2003 HIGHEST RN 566135-25-9

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details: http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

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FILE COVERS 1907 - 14 Aug 2003 VOL 139 ISS 7 FILE LAST UPDATED: 13 Aug 2003 (20030813/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que

L13 · SCR 1568

L18 STR

623 structures

VAR G1=OH/NH2

NODE ATTRIBUTES:

NSPEC IS RC AT 10

CONNECT IS E2 RC AT 9

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 1

NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L21 623 SEA FILE=REGISTRY SSS FUL L18 AND L13

L40 STR

 Subset search

2 C 3 G2 9

1 C C 4

NH2 7

24/ structures

CH2·N @24 23

VAR G2=15/19/24

NODE ATTRIBUTES:

NSPEC IS RC AT 10

NSPEC IS RC AT 12

NSPEC IS RC AT 16

NSPEC IS RC AT 23

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RSPEC 3

NUMBER OF NODES IS 19

STEREO ATTRIBUTES: NONE

KATHLEEN FULLER EIC 1700/PARKER LAW 308-4290

GΙ

$$X^3 = X^4$$
 OH $X^2 = X^4$ OH $X^2 = X^4$ OH $X^3 = X^4$ OH $X^4 = X^4$ OH X^4

III

AB Title compds. I [X1, X2, X3 = S, N, O, etc., with provisos] were prepd. For example, aryl coupling of dioxaborinane II, e.g., prepd. from 3-aminophenol in 4-steps, and 3-bromothiophene, followed by HCL mediated phenol deprotection afforded diaminobenzene III hydrochloride in 23% yield. In coloration studies of bleached hair, 9-examples of compds. I in combination with 4-dyeing developers resulted in a range of hair coloring, e.g., a prepn. of diaminobenzene III hydrochloride and 2,5-diaminotoluene sulfate produced a violet color.

ST prepn aminophenol oxidative dye agent human hair keratin

IT Hair preparations

(dyes; prepn. of aminophenols as oxidative dyeing agents of human hair.)

IT Human

(prepn. of aminophenols as oxidative dyeing agents of human hair.)

IT Keratins

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(prepn. of aminophenols as oxidative dyeing agents of human hair.)

IT 500354-21-2P, 3-Ethoxymethoxyphenylamine 500354-22-3P 500354-23-4P 500354-24-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; prepn. of aminophenols as oxidative dyeing agents of human hair.)

IT 45514-38-3, 4,5-Diamino-1-methyl-1H-pyrazol

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)

(prepn. of aminophenols as oxidative dyeing agents of human hair.) 83-56-7, 1,5-Naphthalenediol 89-25-8, 3-Methyl-1-phenyl-5-pyrazolone

IT 83-56-7, 1,5-Naphthalenediol 89-25-8, 3-Methyl-1-phenyl-5-pyrazolone 89-57-6, 5-Aminosalicylic acid 89-83-8, 5-Methyl-2-(1-methylethyl)phenol 90-15-3, 1-Naphthol 91-56-5, 2,3-Indolindione 91-68-9,

3-Diethylaminophenol 92-44-4, 2,3-Dihydroxynaphthalene 92-65-9, 4-[Ethyl(2-hydroxyethyl)amino]aniline 93-05-0, 4-Diethylaminoaniline

95-55-6, 2-Aminophenol 95-70-5, 1,4-Diamino-2-methylbenzene 95-88-5, 1-Chloro-2,4-dihydroxybenzene 99-07-0, 3-Dimethylaminophenol 99-98-9,

4-Dimethylaminoaniline 101-54-2, 4-Phenylaminoaniline 106-50-3,

1,4-Diaminobenzene, reactions 108-45-2, 1,3-Diaminobenzene, reactions

108-46-3, 1,3-Dihydroxybenzene, reactions 123-30-8, 4-Aminophenol

137-19-9, 1,5-Dichloro-2,4-dihydroxybenzene 141-86-6, 2,6-Diaminopyridine 150-75-4, 4-Methylaminophenol 399-95-1, 399-96-2, 4-Amino-2-fluorophenol 533-31-3, 4-Amino-3-fluorophenol 3,4-Methylenedioxyphenol 533-73-3, 1,2,4-Trihydroxybenzene 575-38-2, 1,7-Naphthalenediol 582-17-2, 2,7-Dihydroxynaphthalene 591-27-5, 608-25-3, 1,3-Dihydroxy-2-methylbenzene 3-Aminophenol 615-50-9 615-66-7, 2-Chloro-1,4-diaminobenzene 619-05-6, 3,4-Diaminobenzoic acid 770-25-2, 3-[(2-Hydroxyethyl)amino]phenol 1004-74-6, 1004-75-7, 2,5,6-Triamino-4-(1H)-pyrimidone 2,4,5,6-Tetraaminopyrimidine 1630-11-1, 1,4-Diamino-3,5-diethylbenzene 1687-53-2, 1953-54-4, 5-Hydroxyindole 2359-52-6, 5-Amino-2-methoxyphenol 4-[Di(2-hydroxyethyl)amino]-2-methylaniline 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2835-95-2, 5-Amino-2-methylphenol 2835-96-3, 4-Amino-2-methylphenol 2835-98-5, 2-Amino-5-methylphenol 2835-99-6, 4-Amino-3-methylphenol 5306-96-7, 1,4-Diamino-2,3-dimethylbenzene 2,5-Diaminopyridine 5349-76-8, 2,4-Diamino-1-methoxy-5-methylbenzene 5697-02-9, 5862-80-6, 4-[(2,3-2-Methyl-1-naphtholacetate Dihydroxypropyl)amino]aniline 6201-65-6, 2-Chloro-1,3-dihydroxybenzene 6265-21-0, 3-[(2-Hydroxyethyl)amino]aniline 6358-09-4, 2-Amino-6-chloro-4-nitrophenol 6393-01-7, 1,4-Diamino-2,5dimethylbenzene 6941-70-4, 6-Bromo-1-hydroxy-3,4-methylenedioxybenzene 7218-02-2, 1,4-Diamino-2,6-dimethylbenzene 7228-00-4, 2-[(3-Hydroxyphenyl)amino]acetamide 7469-77-4, 2-Methyl-1-naphthol 7575-35-1, 4-[Di(2-hydroxyethyl)amino]aniline 14268-66-7, 3,4-Methylenedioxyaniline 16867-03-1, 2-Amino-3-hydroxypyridine 17672-22-9, 2-Amino-6-methylphenol 26011-57-4, 6-Amino-3,4-dihydro-26021-57-8, 3,4-Dihydro-6-hydroxy-1,4(2H)-[1,4] (2H)-benzoxazine 26455-21-0, N-(3-Dimethylaminophenyl)urea benzoxazine 2,3-Diamino-6-methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline 29785-47-5, 4-Amino-2-(methoxymethyl) phenol 39489-79-7, 5-Amino-2,4-dichlorophenol 53222-92-7, 3-Amino-2-methylphenol 55302-96-0, 5-[(2-Hydroxyethyl)amino]-2-methylphenol 61693-42-3, 3-Amino-2, 4-dichlorophenol 66566-48-1, 4-[(2-Methoxyethyl)amino]aniline 67199-87-5, 1,4-Diamino-2-aminomethylbenzene 70643-19-5, 2,4-Diamino-1-(2-hydroxyethoxy)benzene 70643-20-8, 1,3-Diamino-4-(2hydroxyethoxy)benzene sulfate 71077-37-7, 1,3-Diamino-4-(2methoxyethoxy)benzene 71500-41-9, 4-Amino-2-di[(2-hydroxyethyl)amino]-1ethoxybenzene 71500-42-0, 3-[Di(2-hydroxyethyl)amino]aniline 73793-80-3, 1,4-Diamino-2-hydroxymethylbenzene 74918-21-1, 1,3-Bis(2,4-diaminophenoxy)propane tetrahydrochloride 75513-65-4, 1,3-Diamino-4-(2,3-dihydroxypropoxy)benzene 76045-64-2, 3-[(2-Aminoethyl)amino]aniline 78661-33-3, 2-Amino-1-(2-hydroxyethoxy)-4methylaminobenzene 79352-72-0, 4-Amino-2-(aminomethyl)phenol 80592-80-9, 3-[(2,3-Dihydroxypropyl)amino]-2-methylphenol 80592-81-0, 3-[(2-Hydroxyethyl)amino]-2-methylphenol 81329-90-0, 5-[(2-Hydroxyethyl)amino]-1,3-benzodioxol 81892-72-0, 83763-47-7, 2-Amino-4-[(2-1,3-Di(2,4-diaminophenoxy)propane hydroxyethyl)amino]anisol 83763-48-8 84540-47-6, 2,6-Dihydroxy-3,4dimethylpyridine 84540-48-7, 2,4-Diaminophenoxyacetic acid 3-Amino-2-chloro-6-methylphenol 85679-78-3, 3,5-Diamino-2,6-86817-42-7, 2-(4-Amino-2-hydroxyphenoxy)ethanol dimethoxypyridine 90817-34-8, 3-Amino-6-methoxy-2-(methylamino)pyridine 93841-24-8, 1,4-Diamino-2-(2-hydroxyethyl)benzene 93841-25-9 94082-77-6, 2,4-Diamino-1,5-di(2-hydroxyethoxy)benzene 94158-14-2 97902-52-8, 1,4-Diamino-2-(1-methylethyl)benzene 104333-08-6, 4-Amino-2-(2hydroxyethyl)phenol 104333-09-7, 4-Amino-2-(hydroxymethyl)phenol 104752-48-9, 4-[(3-Hydroxypropyl)amino]aniline 104752-50-3,

IT

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104752-51-4, 1,2-Dichloro-3,5-
1-(2-Aminoethoxy)-2,4-diaminobenzene
dihydroxy-4-methylbenzene 105293-89-8, 4-Dipropylaminoaniline
                                  110102-86-8, 5-Amino-4-chloro-2-
109942-17-8, 2,5-Diaminobiphenyl
methylphenol 110952-46-0, 4-Amino-2-[(2-
hydroxyethyl) amino] methylphenol
                                111451-24-2, 2,6-Diamino-3,5-
                   115423-86-4, 1,3-Diamino-2,4-dimethoxybenzene
dimethoxypyridine
122455-85-0, 5-Amino-4-fluoro-2-methylphenol
                                               122481-67-8,
2,4-Di-[(2-Hydroxyethyl)amino]-1,5-dimethoxybenzene
                                                     126335-43-1,
1,4-Diamino-2-(2-hydroxyethoxy)benzene
                                         128729-30-6, 1,3-Bis[(4-
aminophenyl) (2-hydroxyethyl) amino] -2-propanol
                                                130582-53-5,
                                      131657-78-8, 6-Chloro-2-ethylamino-4-
1,4-Bis[(4-Aminophenyl)amino]butane
nitrophenol 135043-64-0, 4-Amino-2-aminomethylphenol
                  137290-78-9, 5-Amino-4-methoxy-2-methylphenol
dihydrochloride
137290-86-9, 5-[(2-Hydroxyethyl)amino]-4-methoxy-2-methylphenol
139443-57-5, 5-Amino-4-ethoxy-2-methylphenol
                                              141614-04-2,
2,4-Diamino-1-ethoxy-5-methylbenzene
                                       141614-05-3, 2,4-Diamino-1-(2-
hydroxyethoxy)-5-methylbenzene 141922-20-5, 2,4-Diamino-1-fluoro-5-
              142082-56-2, 3-[(2-Methoxyethyl)amino]phenol
methylbenzene
146658-65-3, 5-[(3-Hydroxypropyl)amino]-2-methylphenol
                                                         149330-25-6,
2,6-Bis(2-hydroxyethyl)aminotoluene
                                     155601-16-4, 4,5-Diamino-1-(1-
methylethyl)-1H-pyrazol
                          155601-17-5, 4,5-Diamino-1-(2-hydroxyethyl)-1H-
pyrazol
          155601-30-2
                        157469-54-0, 4,5-Diamino-1-[(4-
methylphenyl)methyl]-1H-pyrazol
                                  157469-55-1, 1-[(4-Chlorophenyl)methyl]-
4,5-diamino-1H-pyrazol 159661-45-7, 1,8-Bis(2,5-diaminophenoxy)-3,6-
dioxaoctane
              168092-23-7, Di(2,4-diaminophenoxy)methane 168202-61-7,
4-Amino-3-(hydroxymethyl)phenol 207568-58-9, 2-[2-(Acetylamino)ethoxy]-
1,4-diaminobenzene
                   207923-07-7, 5-Amino-2-ethylphenol
                                                          217311-43-8,
2-4-Diamino-5-fluorotoluene sulfate
                                      244104-61-8, 1,4-Diamino-2-(thiophen-
2-yl)benzene
               246244-41-7, 1,4-Diamino-2-(thiophen-3-yl)benzene
282542-32-9, N,N-Bis(2-hydroxyethyl)-p-phenylenediamine sulfate
306959-12-6, 1,4-Diamino-2-(pyridin-3-yl)benzene
                                                   307493-94-3,
1,3-Diamino-4-(3-hydroxypropoxy)benzene
                                          329320-36-7,
1,4-Diamino-2-(1-hydroxyethyl)benzene 337906-36-2, 1,4-Diamino-2-
methoxymethylbenzene 350482-02-9, 5-Amino-4-fluoro-2-methylphenol
sulfate
RL: COS (Cosmetic use); RCT (Reactant); BIOL (Biological study); RACT
(Reactant or reagent); USES (Uses)
   (prepn. of aminophenols as oxidative dyeing agents
   of human hair.)
500353-66-2P, 5-Amino-2-(3-thienyl)phenol
                                            500353-67-3P,
5-Amino-2-(3-furyl)phenol 500353-68-4P, 5-Amino-2-(pyrrol-3-yl)phenol
500353-69-5P, 5-Amino-2-(1-methyl-1H-pyrrol-3-yl)phenol
                                                          500353-70-8P,
5-Amino-2-(1,3-thiazol-2-yl)phenol 500353-71-9P, 5-Amino-2-(1,3-thiazol-
             500353-72-0P, 5-Amino-2-(2-thienyl)phenol
5-yl)phenol
                                                          500353-73-1P,
                           500353-74-2P, 5-Amino-2-(pyrrol-2-yl)phenol
5-Amino-2-(2-furyl)phenol
500353-75-3P, 5-Amino-2-(1-methyl-1H-pyrrol-2-yl)phenol
                                                          500353-76-4P,
5-Amino-2-(2-chloro-3-thienyl)phenol
                                       500353-77-5P, 5-Amino-2-(2-methyl-3-
thienyl)phenol
                 500353-78-6P, 5-Amino-2-(2-nitro-3-thienyl)phenol
500353-79-7P, 5-Amino-2-(2-amino-3-thienyl)phenol
                                                    500353-80-0P,
5-Amino-2-(2-acetyl-3-thienyl)phenol
                                       500353-81-1P, 5-Amino-2-(2-formyl-3-
thienyl)phenol
                 500353-82-2P, 5-Amino-2-(4-chloro-3-thienyl)phenol
500353-83-3P, 5-Amino-2-(4-methyl-3-thienyl)phenol
                                                     500353-84-4P,
5-Amino-2-(4-nitro-3-thienyl)phenol
                                      500353-85-5P, 5-Amino-2-(4-amino-3-
thienyl)phenol
                 500353-86-6P, 5-Amino-2-(4-acetyl-3-thienyl)phenol
500353-87-7P, 5-Amino-2-(4-formyl-3-thienyl)phenol 500353-88-8P, 5-Amino-2-(5-chloro-3-thienyl)phenol 500353-89-9P, 5-Amino-2-(5-methyl-3-
                500353-90-2P, 5-Amino-2-(5-nitro-3-thienyl)phenol
thienyl)phenol
500353-91-3P, 5-Amino-2-(5-acetyl-3-thienyl)phenol 500353-92-4P,
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5-Amino-2-(5-amino-3-thienyl)phenol 500353-93-5P, 5-Amino-2-(5-formyl-3-
thienyl)phenol 500353-94-6P, 5-Amino-2-(5-formyl-3-furyl)phenol
                                                   500353-96-8P,
500353-95-7P, 5-Amino-2-(3-chloro-2-thienyl)phenol
                                      500353-97-9P, 5-Amino-2-(3-nitro-2-
5-Amino-2-(3-methyl-2-thienyl)phenol
                500353-98-0P, 5-Amino-2-(3-amino-2-thienyl)phenol
thienyl)phenol
500353-99-1P, 5-Amino-2-(3-acetyl-2-thienyl)phenol 500354-00-7P,
                                       500354-01-8P, 5-Amino-2-(4-chloro-2-
5-Amino-2-(3-formyl-2-thienyl)phenol
                500354-02-9P, 5-Amino-2-(4-methyl-2-thienyl)phenol
thienyl)phenol
                                                  500354-04-1P,
500354-03-0P, 5-Amino-2-(4-nitro-2-thienyl)phenol
5-Amino-2-(4-amino-2-thienyl)phenol
                                      500354-05-2P, 5-Amino-2-(4-acetyl-2-
               500354-07-4P, 5-Amino-2-(4-formyl-2-thienyl)phenol
thienyl)phenol
500354-08-5P, 5-Amino-2-(5-chloro-2-thienyl)phenol 500354-09-6P,
                                       500354-10-9P, 5-Amino-2-(5-nitro-2-
5-Amino-2-(5-methyl-2-thienyl)phenol
                500354-11-0P, 5-Amino-2-(5-amino-2-thienyl)phenol
thienyl)phenol
500354-12-1P, 5-Amino-2-(5-acetyl-2-thienyl)phenol
                                                    500354-13-2P,
                                       500354-14-3P, 5-Amino-2-(5-formyl-2-
5-Amino-2-(5-formyl-2-thienyl)phenol
               500354-15-4P, 5-Amino-2-(5-nitro-1,3-thiazol-2-yl)phenol
furyl)phenol
500354-16-5P, 5-Amino-2-(5-amino-1,3-thiazol-2-yl)phenol
                                                           500354-17-6P,
5-Amino-2-(2-nitro-1,3-thiazol-5-yl)phenol
                                             500354-18-7P,
5-Amino-2-(2-amino-1,3-thiazol-5-yl)phenol
                                             500354-19-8P,
5-Amino-2-(3,5-dimethyl-1H-pyrazol-4-yl)phenol
                                                 500354-20-1P,
5-Amino-2-(5-nitro-4H-1,2,4-triazol-3-yl)phenol
                                                  500354-25-6P,
5-Amino-2-(3-thienyl)phenol hydrochloride
                                            500354-26-7P,
5-Amino-2-(3-furyl)phenol hydrochloride
                                          500354-27-8P,
5-Amino-2-(1,3-thiazol-2-yl)phenol hydrochloride
                                                   500354-28-9P,
                                            500354-29-0P,
5-Amino-2-(2-thienyl)phenol hydrochloride
5-Amino-2-(4-methyl-3-thienyl)phenol hydrochloride
                                                     500354-30-3P,
5-Amino-2-(2-chloro-3-thienyl)phenol hydrochloride
                                                     500354-31-4P,
5-Amino-2-(5-chloro-2-thienyl)phenol hydrochloride
                                                     500354-32-5P,
5-Amino-2-(5-acetyl-2-thienyl)phenol hydrochloride
                                                     500354-33-6P,
5-Amino-2-(5-formyl-2-furyl)phenol hydrochloride
RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological
study); PREP (Preparation); USES (Uses)
  (prepn. of aminophenols as oxidative dyeing agents of human hair.)
                           1003-09-4, 2-Bromothiophene
872-31-1, 3-Bromothiophene
                                                           2873-18-9,
                            3034-53-5, 2-Bromo-1,3-thiazol
2-Bromo-5-chlorothiophene
                                                             3188-13-4,
                           4701-17-1, 2-Bromo-5-formylthiophene
Chloromethyl ethyl ether
5370-25-2, 2-Bromo-5-acetylthiophene
                                       22037-28-1, 3-Bromofuran
                                       30318-99-1, 3-Bromo-4-
24424-99-5, Di-tert-butyldicarbonate
                 40032-73-3, 3-Bromo-2-chlorothiophene
                                                          201733-56-4
methylthiophene
RL: RCT (Reactant); RACT (Reactant or reagent)
   (prepn. of aminophenols as oxidative dyeing agents of human hair.)
79352-72-0, 4-Amino-2-(aminomethyl)phenol 110952-46-0,
4-Amino-2-[(2-hydroxyethyl)amino]methylphenol 135043-64-0,
4-Amino-2-aminomethylphenol dihydrochloride
RL: COS (Cosmetic use); RCT (Reactant); BIOL (Biological study); RACT
(Reactant or reagent); USES (Uses)
   (prepn. of aminophenols as oxidative dyeing agents
   of human hair.)
79352-72-0 HCAPLUS
Phenol, 4-amino-2-(aminomethyl)- (9CI)
                                        (CA INDEX NAME)
```

RN -- 110952-46-0 HCAPLUS Phenol, 4-amino-2-[[(2-hydroxyethyl)amino]methyl]- (9CI) (CA INDEX NAME)

135043-64-0 HCAPLUS RNCN Phenol, 4-amino-2-(aminomethyl)-, dihydrochloride (9CI) (CA INDEX NAME)

●2 HCl

L47 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN 2002:777882 HCAPLUS AN 137:296211 DN (1-Amino-4-hydroxyphenyl)acrylamide derivatives and oxidative hair dyes TI containing them IN Chassot, Laurent; Braun, Hans-Juergen PΑ Wella Aktiengesellschaft, Germany PCT Int. Appl., 57 pp. SO CODEN: PIXXD2 DTPatent LA German IC ICM C07C237-20 ICS A61K007-13; D06P001-32; C07D295-18; C07D295-12; C07D231-38; C07D307-52; C07D211-46; C07D207-27; C07D213-75; C07D233-61;

CO7D307-22; CO7D317-66; CO7D207-08; CO7D207-16; CO7D211-42
CC 41-8 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic Sensitizers)
Section cross-reference(s): 25, 27, 28, 62

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE 20021010 WO 2001-EP12126 20011019 WO 2002079144 PI Α1 AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG DE 2001-10115994 20010330 DE 10115994 20021010 A1 20030305 EP 2001-274059 20011019 EP 1286953 Α1 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR BR 2001011197 Α 20030408 BR 2001-11197 20011019 20010330 PRAI DE 2001-10115994 Α WO 2001-EP12126 W 20011019 OS MARPAT 137:296211 GΙ

The invention relates to aminohydroxyphenylacrylamide derivs. (I; R1 = H, halogen, alkyl, hydroxyalkyl, alkoxy; R2, R3 = H, alkyl; R4, R5 = H, alkyl, unsatd. alkyl, hydroxyalkyl, alkoxy, optionally substituted aminoalkyl, cyanoalkyl, carboxyalkyl, aminocarbonylalkyl, arom. group, heterocyclic group) or physiol. acceptable, water-sol. salts of I, and to oxidative hair dyes contg. I as developers. I provide hair dyes with very good fastness to light and washing. Examples were given in which 3-(5-amino-2-hydroxyphenyl)acrylamide derivs. were prepd. from 3-[5-(tert-butoxycarbonylamino)-2-(ethoxymethoxy)phenyl]acrylic acid and the appropriate amines or amine derivs.

ST aminohydroxyphenylacrylamide deriv prodn developer component oxidative hair dye

IT Hair preparations

(dyes, oxidative; aminohydroxyphenylacrylamide deriv. developers for oxidative hair dyes)

IT 467466-23-5 467466-24-6 467466-25-7 467466-26-8 467466-27-9 467466-28-0 467466-29-1 467466-30-4

Ι

RL: TEM (Technical or engineered material use); USES (Uses) (aminohydroxyphenylacrylamide deriv. developers for oxidative hair

IT 128-08-5, N-Bromosuccinimide RL: RCT (Reactant); RACT (Reactant or reagent) (brominating agent; prodn. of aminohydroxyphenylacrylamide deriv. developers for oxidative hair dyes)

8/14/03

ΙT 14268-66-7, 3,4-Methylenedioxyaniline RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)

(couplers for oxidative hair dyes contg. aminohydroxyphenylacrylamide deriv. developers)

89-25-8, 3-Methyl-1-phenyl-5-IT 83-56-7, 1,5-Dihydroxynaphthalene 89-83-8, 5-Methyl-2-(1-methylethyl)phenol 90-15-3, pyrazolone 1-Naphthol 91-56-5, 2,3-Indolinedione 91-68-9, 3-(Diethylamino)phenol 92-44-4, 2,3-Dihydroxynaphthalene 95-88-5, 1-Chloro-2,4-dihydroxybenzene 99-07-0, 3-(Dimethylamino)phenol 108-45-2, 1,3-Diaminobenzene, uses 137-19-9, 1,5-Dichloro-2,4-108-46-3, 1,3-Dihydroxybenzene, uses 141-86-6, 2,6-Diaminopyridine 533-31-3, dihydroxybenzene 3,4-Methylenedioxyphenol 575-38-2, 1,7-Dihydroxynaphthalene 2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 608-25-3, 1,3-Dihydroxy-2-methylbenzene 619-05-6, 3,4-Diaminobenzoic acid 770-25-2, 3-(2-Hydroxyethylamino)phenol 1687-53-2, 5-Amino-2methoxyphenol 1953-54-4, 5-Hydroxyindole 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2835-95-2, 5-Amino-2-methylphenol 3131-52-0, 5,6-Dihydroxyindole 5349-76-8, 2,4-Diamino-1-methoxy-5-methylbenzene 5697-02-9, 2-Methyl-1-naphthol 6201-65-6, 2-Chloro-1, 3-dihydroxybenzene 6265-21-0, 3-(2-Hydroxyethylamino)aniline 6941-70-4, 6-Bromo-1-hydroxy-3,4methylenedioxybenzene 7228-00-4, 2-(3-Hydroxyphenylamino)acetamide 7469-77-4, 2-Methyl-1-naphthol 16867-03-1, 2-Amino-3-hydroxypyridine 26011-57-4, 6-Amino-3, 4-dihydro-1, 4 (2H) -benzoxazine 26021-57-8, 3,4-Dihydro-6-hydroxy-1,4(2H)-benzoxazine 26455-21-0, N-[3-(Dimethylamino)phenyl]urea 28020-38-4, 2,3-Diamino-6-29539-03-5, 5,6-Dihydroxyindoline methoxypyridine 39489-79-7, 5-Amino-2,4-dichlorophenol 53222-92-7, 3-Amino-2-methylphenol 55302-96-0, 5-(2-Hydroxyethylamino)-2-methylphenol 61693-42-3, 3-Amino-2,4-dichlorophenol 70643-19-5, 2,4-Diamino-1-(2hydroxyethoxy) benzene 71077-37-7, 1,3-Diamino-4-(2-methoxyethoxy) benzene 71500-41-9, 4-Amino-2-[bis(2-hydroxyethyl)amino]-1-ethoxybenzene 71500-42-0, 3-[Bis(2-hydroxyethyl)amino]aniline 76045-64-2, 3-(2-Aminoethylamino)aniline 78661-33-3, 2-Amino-1-(2-hydroxyethoxy)-4-(methylamino)benzene 80592-80-9, 3-(2,3-Dihydroxypropylamino)-2-80592-81-0, 3-(2-Hydroxyethylamino)-2-methylphenol methylphenol 81892-72-0, 1,3-Bis(2,4-diaminophenoxy)propane 83763-47-7, 2-Amino-4-(2-hydroxyethylamino)anisole 84540-47-6, 2,6-Dihydroxy-3,4dimethylpyridine 84540-48-7, 2,4-Diaminophenoxyacetic acid 3-Amino-2-chloro-6-methylphenol 85679-78-3, 3,5-Diamino-2,6-86817-42-7, 2-(4-Amino-2-hydroxyphenoxy)ethanol dimethoxypyridine 90817-34-8, 3-Amino-6-methoxy-2-(methylamino)pyridine 94082-77-6, 2,4-Diamino-1,5-bis(2-hydroxyethoxy)benzene 104752-50-3, 1-(2-Aminoethoxy)-2,4-diaminobenzene 104752-51-4, 1,2-Dichloro-3,5dihydroxy-4-methylbenzene 110102-86-8, 5-Amino-4-chloro-2-methylphenol 111451-24-2, 2,6-Diamino-3,5-dimethoxypyridine 115423-86-4, 122455-85-0, 5-Amino-4-fluoro-2-1,3-Diamino-2,4-dimethoxybenzene methylphenol 137290-78-9, 5-Amino-4-methoxy-2-methylphenol 137290-86-9, 5-(2-Hydroxyethylamino)-4-methoxy-2-methylphenol 139443-57-5, 5-Amino-4-ethoxy-2-methylphenol 141614-04-2,

```
2,4-Diamino-1-ethoxy-5-methylbenzene
                                              141614-05-3, 2,4-Diamino-1-(2-
      hydroxyethoxy)-5-methylbenzene 141922-20-5,
                                             142082-56-2, 3-(2-
      2,4-Diamino-1-fluoro-5-methylbenzene
      Methoxyethylamino)phenol 146658-65-3, 5-(3-Hydroxypropylamino)-2-
                    149330-25-6, 2,6-Bis(2-hydroxyethylamino)toluene
      methylphenol
      168092-23-7, Bis(2,4-diaminophenoxy)methane 207923-07-7,
                              244028-58-8, 2,4-Bis(2-hydroxyethylamino)-1,5-
      5-Amino-2-ethylphenol
      dimethoxybenzene 244028-59-9, 5-(2-Hydroxyethylamino)-1,3-benzodioxole
      307493-94-3, 1,3-Diamino-4-(3-hydroxypropoxy)benzene
                                                              364327-98-0,
      1,3-Diamino-4-(2,3-dihydroxypropyl)benzene
      RL: TEM (Technical or engineered material use); USES (Uses)
         (couplers for oxidative hair dyes contg. aminohydroxyphenylacrylamide
         deriv. developers)
. IT
      89-57-6, 5-Aminosalicylic acid 92-65-9, 4-[N-Ethyl-N-(2-
      hydroxyethyl)amino]aniline 93-05-0, 4-(Diethylamino)aniline
                                                                       95-55-6,
                      95-70-5, 1,4-Diamino-2-methylbenzene
                                                              99-98-9,
      2-Aminophenol
      4-(Dimethylamino)aniline 101-54-2, 4-Anilinoaniline
                                                               106-50-3,
                                  150-75-4, 4-(Methylamino)phenol
                                                                    399-95-1,
      1,4-Diaminobenzene, uses
                               399-96-2, 4-Amino-2-fluorophenol
                                                                   533-73-3,
      4-Amino-3-fluorophenol
                                615-66-7, 2-Chloro-1,4-diaminobenzene
      1,2,4-Trihydroxybenzene
      1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7, 2,5,6-Triamino-4-(1H)-
                   1630-11-1, 1,4-Diamino-3,5-diethylbenzene
                                                                2359-52-6,
      4-[Bis(2-hydroxyethyl)amino]-2-methylaniline
                                                      2835-96-3,
      4-Amino-2-methylphenol
                               2835-98-5, 2-Amino-5-methylphenol
                                                                    2835-99-6.
      4-Amino-3-methylphenol
                                4318-76-7, 2,5-Diaminopyridine
                                                                5306-96-7,
                                         5862-80-6, 4-[(2,3-
      1,4-Diamino-2,3-dimethylbenzene
                                       6393-01-7, 1,4-Diamino-2,5-dimethylbenzene
      Dihydroxypropyl)amino]aniline
      7218-02-2, 1,4-Diamino-2,6-dimethylbenzene 17672-22-9,
      2-Amino-6-methylphenol
                              29785-47-5, 4-Amino-2-(methoxymethyl)phenol
      45514-38-3, 4,5-Diamino-1-methyl-1H-pyrazole 66566-48-1,
      4-[(2-Methoxyethyl)amino]aniline 67199-87-5, 1,4-Diamino-2-
                            73793-80-3, 1,4-Diamino-2-(hydroxymethyl)benzene
      (aminomethyl)benzene
      79352-72-0, 4-Amino-2-(aminomethyl)phenol
                                                   93841-24-8,
      1,4-Diamino-2-(2-hydroxyethyl)benzene 97902-52-8, 1,4-Diamino-2-(1-
      methylethyl)benzene 104333-08-6, 4-Amino-2-(2-hydroxyethyl)phenol
      104333-09-7, 4-Amino-2-(hydroxymethyl)phenol 104752-48-9,
      4-[(3-Hydroxypropyl)amino]aniline 105293-89-8, 4-(Dipropylamino)aniline
      109942-17-8, 2,5-Diaminobiphenyl 110952-46-0,
      4-Amino-2-(2-hydroxyethylaminomethyl)phenol
                                                     126335-43-1,
      1,4-Diamino-2-(hydroxyethoxy)benzene 128729-30-6, 1,3-Bis[N-(4-
      aminophenyl)-N-(2-hydroxyethyl)amino]-2-propanol 130582-53-5,
      1,4-Bis(4-aminophenylamino)butane
                                         155601-16-4, 4,5-Diamino-1-(1-
                                157469-54-0, 4,5-Diamino-1-[(4-
      methylethyl)-1H-pyrazole
      methylphenyl)methyl]-1H-pyrazole 157469-55-1, 1-[(4-Chlorophenyl)methyl]-
      4,5-diamino-1H-pyrazole 159661-45-7, 1,8-Bis(2,5-diaminophenoxy)-3,6-dioxaoctane 168202-61-7, 4-Amino-3-(hydroxymethyl)phenol 207568-58-9,
      2-[2-(Acetylamino)ethoxy-1,4-diaminobenzene
                                                    244104-61-8,
      1,4-Diamino-2-(2-thienyl)benzene
                                         246244-41-7, 1,4-Diamino-2-(3-
      thienyl)benzene
                        306959-12-6, 1,4-Diamino-2-(3-pyridyl)benzene
      329320-36-7, 1,4-Diamino-2-(1-hydroxyethyl)benzene 337906-36-2,
      1,4-Diamino-2-(methoxymethyl)benzene
      RL: TEM (Technical or engineered material use); USES (Uses)
          (in oxidative hair dye compns. contg.
          aminohydroxyphenylacrylamide deriv. developers)
                     364599-00-8P
 IT
                                     364599-01-9P
                                                    467466-31-5P
                                                                   467466-32-6P
      364598-99-2P
      RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
       (Reactant or reagent)
          (intermediate; prodn. of aminohydroxyphenylacrylamide deriv.
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developers for oxidative hair dyes)
                                                                 467466-37-1P
                                  467466-35-9P
                                                  467466-36-0P
ΙT
     467466-33-7P
                  467466-34-8P
                                                  467466-41-7P
                                                                 467466-42-8P
                   467466-39-3P
                                   467466-40-6P
     467466-38-2P
                    467466-44-0P
                                                                 467466-47-3P
     467466-43-9P
                                   467466-45-1P
                                                  467466-46-2P
                                   467466-50-8P
                                                  467466-51-9P
                                                                 467466-52-0P
                    467466-49-5P
     467466-48-4P
                                   467466-55-3P
                                                  467466-56-4P
                                                                 467466-57-5P
                    467466-54-2P
     467466-53-1P
                                                                 467466-62-2P
                                                  467466-61-1P
                    467466-59-7P
                                   467466-60-0P
     467466-58-6P
                                                                 467466-67-7P
                                                  467466-66-6P
     467466-63-3P
                    467466-64-4P
                                   467466-65-5P
                                                  467466-71-3P
                                                                 467466-72-4P
     467466-68-8P
                    467466-69-9P
                                   467466-70-2P
                                                  467466-76-8P
                    467466-74-6P
                                   467466-75-7P
     467466-73-5P
     RL: IMF (Industrial manufacture); TEM (Technical or engineered material
     use); PREP (Preparation); USES (Uses)
        (prodn. of aminohydroxyphenylacrylamide deriv. developers for oxidative
       hair dyes)
                                    75-04-7, Ethylamine, reactions
IT
     72-18-4, L-Valine, reactions
                                 96-20-8, 2-Amino-1-butanol
                                                              99-57-0,
     Isopropylamine, reactions
                             107-10-8, Propylamine, reactions
                                                                107-11-9,
     2-Amino-4-nitrophenol
                                                         109-01-3
                                                                    109-83-1,
     Allylamine
                  107-15-3, Ethylenediamine, reactions
                             109-85-3, 2-Methoxyethylamine
                                                              110 - 73 - 6,
     2-(Methylamino)ethanol
                             110-91-8, Morpholine, reactions
     2-(Ethylamino)ethanol
                                                               123-30-8,
                     123-75-1, Pyrrolidine, reactions
                                                        498-63-5, Prolinol
     4-Aminophenol
     616-30-8, 3-Amino-1,2-propanediol
                                         617-89-0, Furfurylamine
                        917-54-4, Methyllithium
                                                  1001-53-2,
     Cyclopropylamine
                               2038-03-1, 4-(2-Aminoethyl)morpholine
     N-Acetylethylenediamine
     2605-67-6, Methoxycarbonylmethylenetriphenylphosphorane 2812-47-7,
     Prolinamide
                   3188-13-4, Chloromethyl ethyl ether
                                                        4214-76-0,
     2-Amino-5-nitropyridine 4795-29-3, Tetrahydrofurfurylamine
                                                                    5036-48-6,
     1-(3-Aminopropyl)imidazole
                                 5382-16-1, 4-Hydroxypiperidine
                                                                   6168 - 72 - 5,
     2-Aminopropanol
                      6638-79-5, N,O-Dimethylhydroxylamine hydrochloride
                                     7575-35-1, 4-[Bis(2-
     6859-99-0, 3-Hydroxypiperidine
     hydroxyethyl)amino]aniline
                                7663-77-6, 1-(3-Aminopropyl)-2-pyrrolidone
     25739-59-7, 2-Amino-3-hydroxypropionamide 50610-33-8
                                                             54840-15-2,
     tert-Butyl N-(4-hydroxyphenyl)carbamate 68621-88-5, tert-Butyl
     3-aminophenylcarbamate 71026-66-9, tert-Butyl 4-aminophenylcarbamate
     155601-17-5, 4,5-Diamino-1-(2-hydroxyethyl)-1H-pyrazole
                                                              325953-40-0
                                               325953-48-8
     325953-41-1
                   325953-45-5
                                325953-46-6
                                                             460084-09-7
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (starting material; prodn. of aminohydroxyphenylacrylamide deriv.
        developers for oxidative hair dyes)
              THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT
RE
(1) Henkel Kgaa; DE 19607751 A 1997 HCAPLUS
     79352-72-0, 4-Amino-2-(aminomethyl)phenol 110952-46-0,
IT
     4-Amino-2-(2-hydroxyethylaminomethyl)phenol
     RL: TEM (Technical or engineered material use); USES. (Uses)
        (in oxidative hair dye compns. contg.
        aminohydroxyphenylacrylamide deriv. developers)
     79352-72-0 HCAPLUS
RN
CN
     Phenol, 4-amino-2-(aminomethyl)- (9CI)
                                             (CA INDEX NAME)
```

RN- 110952-46-0 HCAPLUS CN Phenol, 4-amino-2-[[(2-hydroxyethyl)amino]methyl]- (9CI) (CA INDEX NAME)

L47 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 2002:750510 HCAPLUS

DN 137:280569

TI Preparation of 2-(2-aminoethyl)-1,4-benzenediamines for use in the oxidative dyeing of keratin fibers

IN Chassot, Laurent; Braun, Hans-Juergen

PA Wella A.-G., Germany

SO Ger. Offen., 20 pp. CODEN: GWXXBX

DT Patent

LA German

IC ICM C07C211-51

ICS C07C211-52; C07C211-53; C07C215-08; C07C217-00; D06P001-645; A61K007-13; C07C255-58

CC 40-6 (Textiles and Fibers)

Section cross-reference(s): 25, 41

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

-----PI DE 10112506 A1 20021002 DE 2001-10112506 20010315
PRAI DE 2001-10112506 20010315
OS MARPAT 137:280569

GΙ

AB Title compds. I [R1-R4 = H, alkyl, hydroxyalkyl, etc.; R5 = H, halo, alkyl, etc.; R6, R7 = H, alkyl, alkene, etc.; R8, R9 =H, alkyl] were prepd. For example, NaBH(OAc)3 mediated reductive aminination of benzaldehyde with amine II, prepd. from 2-(2,5-diaminophenyl)ethanol sulfate in 2-steps, followed by amine deprotection, afforded benzenediamine III. In coloration studies of bleached hair, 29-examples of compds. I in combination with 4-dyeing developers resulted in a range of hair coloring, e.g., a prepn. of compd. III and 1,3-benzenediol produced the color blond.

III

ST prepn benzenediamine keratin hair oxidative dye

8/14/03

Ι

IT Hair preparations

(dyes; prepn. of 2-(2-aminoethyl)-1,4-benzenediamines for use as coupling agents in oxidative hair dyes)

IT Hair preparations

Pigments, nonbiological

(prepn. of 2-(2-aminoethyl)-1, 4-benzenediamines for use as coupling agents in oxidative hair dyes)

IT Keratins

RL: IMF (Industrial manufacture); PREP (Preparation)

(prepn. of 2-(2-aminoethyl)-1,4-benzenediamines for use as coupling agents in oxidative hair dyes)

IT 463935-72-0P

RL: IMF (Industrial manufacture); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; prepn. of 2-(2-aminoethyl)-1,4-benzenediamines for use as coupling agents in oxidative hair dyes)

IT 463935-71-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; prepn. of 2-(2-aminoethyl)-1,4-benzenediamines for use as coupling agents in oxidative hair dyes)

IT 83-56-7, 1,5-Dihydroxynaphthalene 89-25-8, 3-Methyl-1-phenyl-5-pyrazolone 89-83-8, 5-Methyl-2-(1-methylethyl)phenol 91-56-5, 1H-Indole-2,3-dione 91-68-9, 3-Diethylaminophenol 92-44-4,

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108-45-2,
                           99-07-0, 3-Dimethylaminophenol
2,3-Dihydroxynaphthalene
1,3-Diaminobenzene, reactions 137-19-9, 1,5-Dichloro-2,4-
                  141-86-6, 2,6-Diaminopyridine 533-31-3,
dihydroxybenzene
                           575-38-2, 1,7-Dihydroxynaphthalene 619-05-6, 3,4-Diaminobenzoic acid
                                                                 582-17-2,
3,4-Methylenedioxyphenol
2,7-Dihydroxynaphthalene
                                 1687-53-2, 5-Amino-2-methoxyphenol
3-[(2-Hydroxyethyl)amino]phenol
                           2380-84-9, 7-Hydroxyindole
                                                          2380-86-1,
1953-54-4, 5-Hydroxyindole
                                             3131-52-0,
                2380-94-1, 4-Hydroxyindole
6-Hydroxyindole
                      5349-76-8, 2,4-Diamino-1-methoxy-5-methylbenzene
5,6-Dihydroxyindole
                                          6265-21-0, 3-[(2-
6201-65-6, 2-Chloro-1,3-dihydroxybenzene
                             6941-70-4, 6-Bromo-1-hydroxy-3,4-
Hydroxyethyl) amino] aniline
methylenedioxybenzene 7228-00-4, 2-[(3-Hydroxyphenyl)amino]acetamide
                                 14268-66-7, 3,4-Methylenedioxyaniline
7469-77-4, 2-Methyl-1-naphthol
16867-03-1, 2-Amino-3-hydroxypyridine
                                        26011-57-4, 6-Amino-3,4-
                              26021-57-8, 3,4-Dihydro-6-hydroxy-1,4(2H)-
dihydro[1,4](2H)-benzoxazine
              28020-38-4, 2,3-Diamino-6-methoxypyridine
                                                          29539-03-5,
benzoxazine
                        39489-79-7, 5-Amino-2, 4-dichlorophenol
5,6-Dihydroxyindoline
53222-92-7, 3-Amino-2-methylphenol 55302-96-0, 5-[(2-Hydroxyethyl)amino]-
                 61693-42-3, 3-Amino-2,4-dichlorophenol
                                                          70643-19-5,
2-methylphenol
2,4-Diamino-1-(2-hydroxyethoxy)benzene
                                         71500-41-9, 4-Amino-2-di[(2-
                                      71500-42-0, 3-[Di(2-
hydroxyethyl)amino]-1-ethoxybenzene
hydroxyethyl)amino]aniline
                             75513-65-4, 1,3-Diamino-4-(2,3-
                           76045-64-2, 3-[(2-Aminoethyl)amino]aniline
dihydroxypropoxy)benzene
78661-33-3, 2-Amino-1-(2-hydroxyethoxy)-4-methylaminobenzene
                                                               80592-80-9,
3-[(2,3-Dihydroxypropyl)amino]-2-methylphenol
                                                80592-81-0,
3-[(2-Hydroxyethyl)amino]-2-methylphenol
                                           81892-72-0,
1,3-Di(2,4-diaminophenoxy)propane
                                    83763-47-7, 2-Amino-4-[(2-
hydroxyethyl)amino]anisol
                            84540-48-7, 2,4-Diaminophenoxyacetic acid
85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine
                                               86817-42-7,
2-(4-Amino-2-hydroxyphenoxy)ethanol 90817-34-8, 3-Amino-6-methoxy-2-
                       94082-77-6, 2,4-Diamino-1,5-di(2-
(methylamino)pyridine
hydroxyethoxy) benzene 104752-50-3, 1-(2-Aminoethoxy)-2, 4-diaminobenzene
104752-51-4, 1,2-Dichloro-3,5-dihydroxy-4-methylbenzene 110102-86-8,
5-Amino-4-chloro-2-methylphenol
                                 111451-24-2, 2,6-Diamino-3,5-
                   115423-86-4, 1,3-Diamino-2,4-dimethoxybenzene
dimethoxypyridine
122455-85-0, 5-Amino-4-fluoro-2-methylphenol 122481-67-8,
2,4-Di[(2-hydroxyethyl)amino]-1,5-dimethoxybenzene
                                                     137290-78-9,
5-Amino-4-methoxy-2-methylphenol 137290-86-9, 5-[(2-Hydroxyethyl)amino]-
4-methoxy-2-methylphenol 139443-57-5, 5-Amino-4-ethoxy-2-methylphenol
141614-04-2, 2,4-Diamino-1-ethoxy-5-methylbenzene 141614-05-3,
2,4-Diamino-1-(2-hydroxyethoxy)-5-methylbenzene
                                                 141922-20-5,
2,4-Diamino-1-fluoro-5-methylbenzene
                                       142082-56-2, 3-[(2-
Methoxyethyl)amino]phenol
                            146658-65-3, 5-[(3-Hydroxypropyl)amino]-2-
              149330-25-6, 2,6-Bis(2-hydroxyethyl)aminotoluene
methylphenol
168092-23-7, Di(2,4-diaminophenoxy) methane 207923-07-7,
5-Amino-2-ethylphenol 244028-59-9, 5-[(2-Hydroxyethyl)amino]-1,3-
benzodioxole
RL: COS (Cosmetic use); RCT (Reactant); BIOL (Biological study); RACT
(Reactant or reagent); USES (Uses)
   (prepn. of 2-(2-aminoethyl)-1,4-benzenediamines for use as coupling
   agents in oxidative hair dyes)
463935-35-5P
               463935-36-6P
                              463935-37-7P
                                             463935-38-8P
                                                             463935-39-9P
463935-40-2P
               463935-41-3P
                              463935-42-4P
                                             463935-43-5P
                                                             463935-44-6P
                              463935-47-9P
463935-45-7P
               463935-46-8P
                                             463935-48-0P
                                                             463935-49-1P
463935-50-4P
               463935-51-5P
                              463935-52-6P
                                             463935-53-7P,
N-[4-[[2-(2,5-Diaminophenyl)ethylamino]methyl]phenyl]acetamide
Hydrochloride
                463935-54-8P
                               463935-55-9P
                                              463935-56-0P
                                                             463935-57-1P
463935-59-3P
               463935-61-7P
                              463935-63-9P
                                             463935-65-1P,
```

TТ

2-[2-(2,5-Diaminophenyl)ethylamino]-5-nitrobenzoic acid Hydrochloride 463935-67-3P 463935-68-4P 463935-69-5P 463935-70-8P, 4-[2-(2,5-Diaminophenyl)ethylamino]-3-nitrobenzoic acid Hydrochloride RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (product; prepn. of 2-(2-aminoethyl)-1,4-benzenediamines for use as coupling agents in oxidative hair dyes) 95-88-5, 1-Chloro-2, 4-dihydroxybenzene ΙT 90-15-3, 1-Naphthalenol 98-03-3, 2-97-51-8, 2-Hydroxy-5-nitrobenzaldehyde 100-10-7, 4-Dimethylaminobenzaldehyde Thiophenecarboxaldehyde 100-52-7, Benzaldehyde, reactions 106-50-3, 1,4-Diaminobenzene, reactions 107-82-4, 1-Bromo-3-methylbutane 108-46-3, 1,3-Dihydroxybenzene, reactions 109-65-9, 1-Bromobutane 120-57-0, 3,4-Methylenedioxybenzaldehyde 122-85-0, 4-Acetylamino-benzaldehyde 123-08-0, 4-Hydroxybenzaldehyde 123-30-8, 4-Aminophenol 350-46-9, 4-Fluoronitrobenzene 364-73-8, 5-Bromo-2-fluoronitrobenzene 364-74-9, 446-35-5, 2,4-Difluoronitrobenzene 2,5-Difluoronitrobenzene 364-76-1 453-71-4, 4-Fluoro-3-nitrobenzoic acid 498-62-4, Thiophen-3-aldehyde 500-22-1, Pyridin-3-aldehyde 555-16-8, 4-Nitrobenzaldehyde, reactions 500-22-1, Pyridin-3-aldehyde 587-04-2, 3-Chlorobenzaldehyde 591-27-5, 3-Aminophenol 2-Methyl-1,3-dihydroxybenzene 615-50-9 872-85-5, 4-608 - 25 - 3, Pyridinecarboxaldehyde 1121-60-4, 2-Pyridinecarboxaldehyde 1493-27-2, 2-Fluoronitrobenzene 2043-61-0, Cyclohexane-1-aldehyde 2835-95-2, 5-Amino-2-methylphenol 2835-99-6, 3-Methyl-4-aminophenol 3446-89-7. 4-Methylsulfanylbenzaldehyde 4701-17-1, 5-Bromothiophen-2-aldehyde 5697-02-9, 1-Acetoxy-2-methylnaphthalene 6203-18-5, 4-Dimethylamino-6921-22-8, 2,3-Difluoronitrobenzene 7304-32-7, zimtaldehyde 18791-75-8, 4-Bromothiophen-2-aldehyde 2-Fluoro-5-nitrobenzoic acid 24424-99-5, Di-tert-butyldicarbonate 51980-54-2, 4-Pyrrolidin-1ylbenzaldehyde 70643-20-8, 1,3-Diamino-4-(2-hydroxyethoxy)benzene sulfate 83763-48-8 84540-50-1, 3-Amino-2-chloro-6-methylphenol 93841-25-9, 2-(2,5-Diaminophenyl) ethanol Sulfate 135043-64-0, 4-Amino-2-aminomethylphenol dihydrochloride 155601-30-2 463935-74-2 463935**-**73-1 RL: RCT (Reactant); RACT (Reactant or reagent) (reactant; prepn. of 2-(2-aminoethyl)-1,4-benzenediamines for use as coupling agents in oxidative hair dyes) 135043-64-0, 4-Amino-2-aminomethylphenol dihydrochloride ΙT RL: RCT (Reactant); RACT (Reactant or reagent) (reactant; prepn. of 2-(2-aminoethyl)-1,4-benzenediamines for use as coupling agents in oxidative hair dyes) 135043-64-0 HCAPLUS RN Phenol, 4-amino-2-(aminomethyl)-, dihydrochloride (9CI) (CA INDEX NAME) CN

2 HCl

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ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN
L47
     2002:574886 HCAPLUS
AN
     137:129538
DN
ΤI
     Aminophenols as primary intermediates for oxidative coloration
     of hair
                                                                applicants
     Lim, Mu-Ill; Pan, Yuh-Guo
ΙN
PA
     Clairol Incorporated, USA
     PCT Int. Appl., 49 pp.
SO
     CODEN: PIXXD2
DT.
    Patent-
LA English
     ICM A61K007-13
IC
     62-3 (Essential Oils and Cosmetics)
CC
     Section cross-reference(s): 25
FAN.CNT 1
     PATENT NO.
                     KIND DATE
                                          APPLICATION NO. DATE
                           _____
                                          -----
                    A1 20020801 WO 2002-US1532 20020118
     WO 2002058653
PΤ
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
            GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
             RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ,
            VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
             CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
                          20021017
                                         US 2002-52322
                                                           20020118
     US 2002148052
                     A1
PRAI US 2001-263544P
                           20010123
                     P
    MARPAT 137:129538
OS
     Primary intermediates for hair coloring compns. for oxidative
AΒ
     dyeing of hair are 4-amino-2-(2 or 3-amino or substituted amino-Et or
     propyl) phenol compd. A hair dyeing compn. comprises, in a suitable
     carrier or vehicle, an effective hair dyeing amt. of at least one coupler
     and at least one aminophenol primary intermediate, and a
     developer compn. contg. one ore more oxidizing agents.
ST
     aminophenol deriv primary intermediate oxidative hair dye
    Hair preparations
IT
        (dyes, oxidative; oxidative hair coloring compns. contg. aminophenols
        and other primary intermediates)
IT
     Oxidizing agents
        (oxidative hair coloring compns. contq. aminophenols and other primary
        intermediates)
ΙT
     90-15-3, Naphthalen-1-ol 95-55-6, 2-Aminophenol
     2-Methylbenzene-1,4-diamine 95-88-5, 4-Chlorobenzene-1,3-diol
     106-50-3, Benzene-1,4-diamine, biological studies 108-45-2,
     Benzene-1,3-diamine, biological studies
                                             108-46-3, Benzene-1,3-diol,
    biological studies 123-30-8, 4-Aminophenol 150-75-4,
     4-Methylaminophenol 591-27-5, 3-Aminophenol
                                                   608-25-3,
     2-Methyl-benzene-1,3-diol
                               1004-74-6, Pyrimidinetetramine 2380-86-1,
                   2835-95-2, 5-Amino-2-methylphenol 2835-98-5,
     1H-Indol-6-ol
     2-Amino-5-methylphenol 2835-99-6, 4-Amino-3-methylphenol 7469-77-4,
     2-Methyl-naphthalen-1-ol 7575-35-1 7722-84-1, Hydrogen peroxide,
    biological studies 16867-03-1, 2-Aminopyridin-3-ol 17672-22-9,
     2-Amino-6-methylphenol 26021-57-8, 3,4-Dihydro-2H-1,4-benzoxazin-6-ol
```

41927-22-4, 4-Methyl-2-phenyl-2,4-dihydro-3H-pyrazol-3-one 53222-92-7,

ΙT

```
8/14/03
                                 Page 18
3-Amino-2-methylphenol 55302-96-0, 5-(2-Hydroxyethylamino)-2-
methylphenol 70643-19-5, 2-(2,4-Diamino-phenoxy)-ethanol 83763-47-7
93841-24-8, 2-(2,5-Diamino-phenyl)-ethanol 94082-77-6 129697-50-3
            155601-17-5 157469-54-0 220264-60-8 307493-94-3,
131311-66-5
3-(2,4-Diaminophenoxy)-propan-1-ol
                                   329320-36-7
RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
   (oxidative hair coloring compns. contg. aminophenols and other primary
   intermediates)
289041-27-6P 444178-42-1P 444178-43-2P
                           444178-46-5P
444178-44-3P 444178-45-4P
444178-47-6P 444178-48-7P 444178-49-8P
444178-50-1P 444178-51-2P
RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological
study); PREP (Preparation); USES (Uses)
   (oxidative hair coloring compns. contg.
   aminophenols and other primary intermediates)
119-84-6, 3,4-Dihydrocoumarin 553-86-6, 2-Coumaranone
RL: RCT (Reactant); RACT (Reactant or reagent)
   (oxidative hair coloring compns. contg. aminophenols and other primary
   intermediates)
20920-99-4P
             21997-23-9P
(Reactant or reagent)
```

TΤ

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(oxidative hair coloring compns. contg. aminophenols and other primary intermediates)

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD RE

(1) de La Mettrie; US 5976195 A 1999 HCAPLUS

289041-27-6P 444178-42-1P 444178-43-2P 444178-44-3P 444178-45-4P 444178-47-6P 444178-48-7P 444178-49-8P 444178-50-1P 444178-51-2P

> RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(oxidative hair coloring compns. contg.

aminophenols and other primary intermediates)

289041-27-6 HCAPLUS RN

Phenol, 4-amino-2-[2-[(2-hydroxyethyl)amino]ethyl]- (9CI) (CA INDEX NAME) CN

444178-42-1 HCAPLUS RN

Phenol, 4-amino-2-[2-(dimethylamino)ethyl]- (9CI) (CA INDEX NAME) CN

$$\begin{array}{c} \text{OH} \\ \\ \text{CH}_2\text{--}\text{CH}_2\text{--}\text{NMe}_2 \\ \\ \text{NH}_2 \end{array}$$

RN ---444178-43=2 HCAPLUS
CN Phenol, 4-amino-2-[3-(dimethylamino)propyl]- (9CI) (CA INDEX NAME)

OH (CH₂)
$$3-NMe_2$$

$$NH_2$$

RN 444178-44-3 HCAPLUS CN Phenol, 4-amino-2-[2-(diethylamino)ethyl]- (9CI) (CA INDEX NAME)

RN 444178-45-4 HCAPLUS CN Phenol, 4-amino-2-[3-(diethylamino)propyl]- (9CI) (CA INDEX NAME)

RN 444178-47-6 HCAPLUS CN Phenol, 4-amino-2-[2-(1-piperidinyl)ethyl]- (9CI) (CA INDEX NAME) RN 444178-48-7 HCAPLUS
CN Phenol, 4-amino-2-[3-(1-piperidinyl)propyl]- (9CI) (CA INDEX NAME)

8/14/03

RN 444178-49-8 HCAPLUS CN Phenol, 4-amino-2-[2-(3-pyridinylamino)ethyl]- (9CI) (CA INDEX NAME)

RN 444178-50-1 HCAPLUS CN Phenol, 4-amino-2-[2-(1H-imidazol-1-yl)ethyl]- (9CI) (CA INDEX NAME)

444178-51-2 HCAPLUS RN

Phenol, 4-amino-2-[2-(4-morpholinyl)ethyl]- (9CI) (CA_INDEX_NAME) CN

```
OH
      CH2-CH2-
NH2
```

ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN L47

8/14/03

2002:391278 HCAPLUS AN

136:390726 DN

ΤI Enzymatic hair-coloring agent

Kleen, Astrid; Saettler, Andrea; Hoeffkes, Horst; Maurer, Karl-Heinz IN

PΑ Henkel Kgaa, Germany

SO Ger. Offen., 20 pp.

CODEN: GWXXBX

Patent DТ

LΑ German

ICM A61K007-13 TC

ICS C12N009-00

62-3 (Essential Oils and Cosmetics) CC

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE ______ ______ 20020523 DE 2000-10057545 20001120 DE 10057545 A1 20001120

PRAI DE 2000-10057545

The subject of the present invention pertains to the dyeing of keratinic AB fibers, including in a cosmetically acceptable carrier at least one dye intermediate and at least one phenol-oxidizing enzyme, which can be obtained from fungi such as Acremonium. The agents according to invention are characterized by their good coloring achievement as well as

by their gentle effect upon the hair.

ST hair dye enzyme Acremonium IT Surfactants

> (amphoteric; hair-coloring agent employing a phenol-oxidizing enzyme from Acremonium)

IT Hair preparations

> (dyes, oxidative; hair-coloring agent employing a phenol-oxidizing enzyme from Acremonium)

IT Hair preparations

> (dyes; hair-coloring agent employing a phenol-oxidizing enzyme from Acremonium)

Keratins IT

RL: BSU (Biological study, unclassified); BIOL (Biological study) (fibers; hair-coloring agent employing a phenol-oxidizing enzyme from Acremonium)

IT Acremonium

Acremonium murorum

Acremonium murorum murorum

(hair-coloring agent employing a phenol-oxidizing enzyme from Acremonium)

Enzymes, biological studies IT RL: BSU (Biological study, unclassified); COS (Cosmetic use); BIOL (Biological study); USES (Uses) (hair-coloring agent employing a phenol-oxidizing enzyme from Acremonium) Surfactants IT (nonionic; hair-coloring agent employing a phenol-oxidizing enzyme from Acremonium) 108-95-2, Phenol, biological studies TΤ RL: BSU (Biological study, unclassified); BIOL (Biological study) (enzymes oxidizing; hair-coloring agent employing a phenol-oxidizing enzyme from Acremonium) 9002-10-2P, Phenol oxidase IT RL: BPN (Biosynthetic preparation); BSU (Biological study, unclassified); COS (Cosmetic use); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation); USES (Uses) (hair-coloring agent employing a phenol-oxidizing enzyme from Acremonium) 74-79-3, Arginine, biological studies 95-88-5, 4-Chlororesorcin ΙT 108-46-3, Resorcin, biological studies 120-72-9, Indole, biological 141-43-5, Monoethanolamine, 120-72-9D, Indole, derivs. 496-73-1, 4-Methylresorcin 591-27-5, 3-Aminophenol biological studies 2784-89-6, HC Red 1 2835-99-6, 2380-86-1, 6-Hydroxyindole 615-50-9 3131-52-0, 5,6-Dihydroxyindole 6297-14-9 3-Methyl-4-aminophenol 6358-09-4, 4-Amino-2-((diethylamino)methyl)phenol dihydrochloride 2-Amino-4-nitro-6-chlorophenol 16867-03-1, 2-Amino-3-hydroxypyridine 41959-35-7, 1,2,3,4-Tetrahydro-6-nitroquinoxaline 55302-96-0 56932-44-6, HC Yellow 5 61693-43-4 74918-21-1 117907-43-4, 4-Amino-2-nitrodiphenylamine-2'-carboxylic acid 135043-64-0, 4-Amino-2-aminomethylphenol dihydrochloride RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (hair-coloring agent employing a phenoloxidizing enzyme from Acremonium) 6297-14-9, 4-Amino-2-((diethylamino)methyl)phenol dihydrochloride ΙT 135043-64-0, 4-Amino-2-aminomethylphenol dihydrochloride RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (hair-coloring agent employing a phenoloxidizing enzyme from Acremonium)

Page 22

6297-14-9 HCAPLUS RN

Phenol, 4-amino-2-[(diethylamino)methyl]-, dihydrochloride (9CI) CN INDEX NAME)

2 HCl

135043-64-0 HCAPLUS RN

Phenol, 4-amino-2-(aminomethyl)-, dihydrochloride (9CI) (CA INDEX NAME)

2 HCl

L47

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ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN
     2002:256016 HCAPLUS
AN
     136:284164
DN
     Oxidative hair dyes containing 2-amino-5-methylphenol
ΤI
     Hoeffkes, Horst; Oberkobusch, Doris; Erkens, Udo; Meinigke, Bernd
ΙN
     Henkel Kommanditgesellschaft auf Aktien, Germany
PA
     PCT Int. Appl., 39 pp.
SO
     CODEN: PIXXD2
DT
     Patent
     German
LΑ
IC
     ICM A61K007-13
CC
     62-3 (Essential Oils and Cosmetics)
FAN.CNT 1
                                           APPLICATION NO.
                                                            DATE
     PATENT NO.
                      KIND DATE
                                           _____
                     ____
                            20020404
                                           WO 2001-EP10851 20010920
                       A2
ΡĪ
     WO 2002026201
     WO 2002026201
                      А3
                            20020704
         W: AU, BR, CA, CN, CZ, HU, JP, NO, PL, RU, SK, US, VN
         RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE, TR
     DE 10048733
                                           DE 2000-10048733 20000929
                      A1
                            20020418
                      A5
                            20020408
                                           AU 2001-95575
                                                            20010920
     AU 2001095575
                            20000929
PRAI DE 2000-10048733 A
                       W
                            20010920
     WO 2001-EP10851
     MARPAT 136:284164
os
     The invention relates to agents for dyeing keratinous fibers, esp. hair
AΒ
     contg. the following dye intermediates in a cosmetically
     acceptable medium: (A) 2-amino-5-methylphenol; (B) at least one
     p-aminophenol deriv.; and (C) at least one coupler component, selected
     from the following: (c1) the m-aminophenol derivs. and (c2) the pyridine
     derivs. The inventive agents produce particularly intensive orange colors
     with excellent fastness characteristics and are also characterized by
     their extremely good toxicol. characteristics. Thus a compn. contained
     (wt./wt.%): Hydrenol D 8.5; Lorol 2.0; Eumulgin B 0.75; Texapon NSO 20.0;
     Dehyton K 12.5; sodium sulfite 0.5; ammonium sulfate 0.4;
     2-amino-5-methylphenol 0.18; 4-amino-3-methylphenol 0.37; 3-aminophenol
     0.16; ammonia (25%) to pH10; propylene glycol 2.0; water to 100.
ST
     oxidative hair dye amino methylphenol
TΤ
     Hair preparations
        (dyes, oxidative; oxidative hair dyes contg. 2-amino-5-methylphenol)
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052322 8/14/03
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IΤ
    Dyes
        (oxidative hair dyes contg. 2-amino-5-methylphenol)
     91-68-9, 3-(Diethylamino)phenol 110-86-1D, Pyridine, derivs.
IT
     3-Ethylamino-4-methylphenol
                                 123-30-8, p-Aminophenol
                                                            123-30-8D,
     p-Aminophenol, derivs.
                              141-86-6, 2,6-Diaminopyridine
                                                              150-75-4,
     N-Methyl-p-Aminophenol
                              399-95-1, 4-Amino-3-fluorophenol
                                                                 399-96-2,
                              591-27-5D, 3-Aminophenol, derivs.
                                                                  609-21-2
     4-Amino-2-fluorophenol
                                 626-06-2, 2,6-Dihydroxypyridine
                                                                   2835-95-2,
     2,6-Dibromo-4-aminophenol
                                                                  2835-99-6,
                             2835-98-5, 2-Amino-5-methylphenol
     5-Amino-2-methylphenol
                              3964-52-1, 4-Amino-2-chlorophenol
                                                                  4664-16-8,
     4-Amino-3-methylphenol
                                      5930-28-9; 2,6-Dichloro-4-aminophenol
     2,6-Dihydroxy-4-methylpyridine
     6994-64-5, 2,6-Dimethyl-3-aminophenol 7722-84-1, Hydrogen peroxide,
    biological studies
                         16867-03-1, 2-Amino-3-hydroxypyridine
                                                                  28020-38-4,
     2,3-Diamino-6-methoxypyridine
                                    29785-47-5, 4-Amino-2-methoxymethylphenol
     40966-87-8, 3-Pyridinol, 2-amino-5-chloro- 51387-92-9, Phenol,
     4-amino-2-[(diethylamino)methyl]- 55302-96-0, 5-(2-Hydroxyethyl)amino-2-
                    61693-42-3, 2,4-Dichloro-3-aminophenol 79352-72-0
    methylphenol
                                    84540-47-6, 2,6-Dihydroxy-3,4-
     , 4-Amino-2-aminomethylphenol
                       84540-50-1, 3-Amino-2-chloro-6-methylphenol
     dimethylpyridine
     85679-78-3, 3,5-Diamino-2,6-dimethoxypyridine
                                                     86817-42-7
                                                                  90817-34-8,
     3-Amino-2-methylamino-6-methoxypyridine
                                               104333-09-7,
     4-Amino-2-hydroxymethylphenol
                                    104903-49-3
                                                   110102-86-8,
     5-Amino-4-chloro-2-methylphenol 110952-46-0
                                                   137290-78-9,
     5-Amino-4-methoxy-2-methylphenol
                                       168202-61-7, 4-Amino-3-
                          196198-80-8, 4-Amino-2-(2-hydroxyethoxy)phenol
     hydroxymethylphenol
     215323-01-6
                  373382-96-8
     RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
        (oxidative hair dyes contg.
        2-amino-5-methylphenol)
     51387-92-9, Phenol, 4-amino-2-[(diethylamino)methyl]-
IT
     79352-72-0, 4-Amino-2-aminomethylphenol 110952-46-0
     RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
        (oxidative hair dyes contg.
        2-amino-5-methylphenol)
     51387-92-9 HCAPLUS
RN
     Phenol, 4-amino-2-[(diethylamino)methyl]- (9CI) (CA INDEX NAME)
CN
```

```
NH2
CH2-NEt2
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RN 79352-72-0 HCAPLUS
CN Phenol, 4-amino-2-(aminomethyl)- (9CI) (CA INDEX NAME)

```
NH2
       CH_2 - NH_2
```

110952-46-0 HCAPLUS RN Phenol, 4-amino-2-[[(2-hydroxyethyl)amino]methyl]- (9CI) (CA INDEX NAME) CN

$$_{\rm OH}^{\rm NH2}$$
 $_{\rm CH_2-NH-CH_2-CH_2-OH}^{\rm NH2}$

```
136:236658
DN
     Primary intermediates for oxidative coloration of hair
TI
     comprising arylaminomethylaminophenols
     Pan, Yuh-guo; Lim, Mu-ill
IN
```

ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN

8/14/03

Bristol-Myers Squibb Company, USA PA

2002:171639 HCAPLUS

PCT Int. Appl., 54 pp. SO

CODEN: PIXXD2

DTPatent

AN

LΑ English

ICM A61K007-13 IC

62-3 (Essential Oils and Cosmetics) Section cross-reference(s): 25

FAN.CNT 1

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PATENT NO.
                                            APPLICATION NO.
                      KIND DATE
                                                              DATE
                                             -----
                             20020307
                                            WO 2001-US25554 20010815
PΙ
     WO 2002017866
                       A1
             AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT,
             RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ,
             VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
                                            AU 2001-88261
     AU 2001088261
                       A5
                             20020313
                                                              20010815
                                            EP 2001-967982
     EP 1331918
                       A1
                             20030806
                                                              20010815
             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
                             20021010
                                            US 2001-930651
     US 2002144355
                       A1
                                                              20010816
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Page 26

ELHILO 10/052322 8/14/03

US 6562080 B2 20030513
PRAI US 2000-229182P P 20000830
WO 2001-US25554 W 20010815
OS MARPAT 136:236658
GI

Primary intermediates useful hair coloring systems comprise 2-arylaminomethyl-4-aminophenols. The invention provides new 2-arylaminomethyl-4-aminophenol compds. of I wherein R is a moiety selected from formulas (a), (b) or (c) wherein R1, R2, R3, R4 and R5 are each independently selected from a hydrogen atom, a halogen atom, a hydroxy group, an amino group, a C1-6 alkyl or haloalkyl group, a C1-6 alkoxy or haloalkoxy group, and a nitrile group, and R6 is a hydrogen atom, a halogen atom, a C1-4 alkyl or a C1-4 alkoxy group. Formulation of a hair dye contg. a 4-(5-amino-2-hydroxybenzylamino)-benzonitrile, 2-aminophenol, and resorcinol is disclosed.

ST oxidative hair coloration arylaminomethyl aminophenol

IT Hair preparations

(dyes, oxidative; primary intermediates for oxidative coloration of hair comprising arylaminomethylaminophenols)

IT Oxidizing agents

(primary intermediates for oxidative coloration of hair comprising arylaminomethylaminophenols)

IT 90-15-3, Naphthalen-1-ol 95-70-5, 2-MethylBenzene-1,4-diamine 106-50-3, Benzene-1, 4-diamine, biological 4-ChloroBenzene-1,3-diol 108-46-3, Benzene-1,3-diol, biological studies 123-30-8, studies 591-27-5 608-25-3 1004-74-6, Pyrimidinetetramine 4-Aminophenol 2835-95-2 2835-98-5, 2-Amino-5-methylphenol 2380-86-1, 1H-Indol-6-ol 2835-99-6, 4-Amino-3-Methylphenol 7469-77-4, 2-Methylnaphthalen-1-ol 16867-03-1, 2-Aminopyridin-3-ol 17672-22-9, 2-Amino-6-methylphenol 26021-57-8, 3,4-Dihydro-2H-1,4-benzoxazin-6-ol 41927-22-4 53222-92-7 93841-24-8, 2-(2,5-Diamino-phenyl)-ethanol 55302-96-0 70643-19-5 220264-60-8 307493-94-3 94082-77-6 129697-50-3 155601-17-5 329320-36-7 **402940-52-7 402940-53-8** 402940-54-9 402940-55-0 402940-56-1 402940-57-2 402940-58-3 402940-59-4 402940-60-7 402940-61-8 402940-62-9 402940-63-0 402940-64-1 402940-65-2 402940-66-3 402940-67-4 402940-68-5 402940-69-6 402940-70-9 402940-71-0 402940-72-1 402940-73-2 402940-74-3 402940-75-4 402940-76-5 402940-77-6 402940-78-7 402940-79-8 402940-80-1

402940-81-2 402940-82-3 402940-83-4 402940-84-5 402940-85-6 402940-86-7 402940-87-8 402940-88-9 402940-89-0

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ELHILO 10/052322
                      8/14/03
     402940-90-3 402940-91-4 402940-92-5
     402940-93-6 402940-94-7 402940-95-8
     402940-96-9 402940-97-0 402940-98-1
     402940-99-2
                   402941-00-8
    RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)
        (primary intermediates for oxidative
        coloration of hair comprising
        arylaminomethylaminophenols)
             THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT
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RE

(1) Clausen; US 4797130 A 1989 HCAPLUS 402940-52-7 402940-53-8 402940-54-9 402940-55-0 402940-56-1 402940-57-2 402940-58-3 402940-59-4 402940-60-7 402940-61-8 402940-62-9 402940-63-0 402940-64-1 402940-65-2 402940-66-3 402940-67-4 402940-68-5 402940-69-6 402940-70-9 402940-71-0 402940-72-1 402940-73-2 402940-74-3 402940-75-4 402940-76-5 402940-77-6 402940-78-7 402940-79-8 402940-80-1 402940-81-2

402940-82-3 402940-83-4 402940-84-5 402940-85-6 402940-86-7 402940-87-8 402940-88-9 402940-89-0 402940-90-3 402940-91-4 402940-92-5 402940-93-6 402940-94-7 402940-95-8 402940-96-9 402940-97-0 402940-98-1

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (primary intermediates for oxidative coloration of hair comprising arylaminomethylaminophenols)

402940-52-7 HCAPLUS RN

CN Phenol, 4-amino-2-[(phenylamino)methyl]- (9CI) (CA INDEX NAME)

RN 402940-53-8 HCAPLUS CN Phenol, 4-amino-2-[[(3-chlorophenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-54-9 HCAPLOS
CN Phenol, 4-amino-2-[[(4-fluorophenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-55-0 HCAPLUS CN Phenol, 4-amino-2-[[(2-ethoxyphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-56-1 HCAPLUS CN Phenol, 4-amino-2-[[(4-ethoxyphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-57-2 HCAPLUS
CN Phenol, 4-amino-2-[[(3-fluoro-4-methoxyphenyl)amino]methyl]- (9CI) (CAINDEX NAME)

RN 402940-58-3 HCAPLUS

CN Phenol, 4-amino-2-[[(3-methoxyphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-59-4 HCAPLUS

CN Phenol, 4-amino-2-[[(3,4-dimethylphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} \text{OH} \\ \hline \\ \text{CH}_2 - \text{NH} \\ \hline \\ \text{NH}_2 \end{array} \qquad \begin{array}{c} \text{Me} \\ \end{array}$$

RN 402940-60-7 HCAPLUS

CN Phenol, 4-amino-2-[[(3-fluorophenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-61-8 HCAPLUS

CN Phenol, 4-amino-2-[[(2-methoxy-5-methylphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

ELHILO 10/052322

8/14/03 .

Page 30

RN 402940-62-9 HCAPLUS

CN Phenol, 4-amino-2-[[(4-methoxy-2-methylphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-63-0 HCAPLUS

CN Phenol, 4-amino-2-[[(5-methoxy-2-methylphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-64-1 HCAPLUS

CN Benzonitrile, 3-[[(5-amino-2-hydroxyphenyl)methyl]amino]- (9CI) (CA INDEX NAME)

RN 402940-65-2 HCAPLUS

CN Phenol, 4-amino-2-[[[3-(trifluoromethyl)phenyl]amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-66-3 HCAPLUS
CN Phenol, 4-amino-2-[[[4-(trifluoromethyl)phenyl]amino]methyl]- (9CI) (CAINDEX NAME)

RN 402940-67-4 HCAPLUS
CN Phenol, 4-amino-2-[[(4,6-dimethyl-2-pyridinyl)amino]methyl]- (9CI) (CA
INDEX NAME)

RN 402940-68-5 HCAPLUS
CN Phenol, 4-amino-2-[[(3,4-dimethoxyphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-69-6 HCAPLUS CN Phenol, 4-amino-2-[[(4-hydroxyphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-70-9 HCAPLUS

CN Phenol, 4-amino-2-[[(4-ethylphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-71-0 HCAPLUS

CN Phenol, 4-[[(5-amino-2-hydroxyphenyl)methyl]amino]-2,5-dimethyl- (9CI) (CA INDEX NAME)

RN 402940-72-1 HCAPLUS

CN Phenol, 4-amino-2-[[(4-methoxyphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-73-2 HCAPLUS

CN Phenol, 4-amino-2-[[(2-chlorophenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-74-3 HCAPLUS
CN Phenol, 4-amino-2-[[(4-methylphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

$$CH_2-NH$$
 Me

RN 402940-75-4 HCAPLUS CN Phenol, 4-amino-2-[[(2-methylphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-76-5 HCAPLUS CN Phenol, 4-amino-2-[[(2-methoxyphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-77-6 HCAPLUS CN Phenol, 4-amino-2-[[(3-methylphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

$$CH_2-NH$$
 NH_2

RN- 402940-78-7 HCAPLUS CN Phenol, 4-amino-2-[[(4-propylphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-79-8 HCAPLUS CN Phenol, 4-amino-2-[[(2,3-dimethylphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-80-1 HCAPLUS
CN Phenol, 4-amino-2-[[(2,5-dimethylphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-81-2 HCAPLUS
CN Phenol, 4-amino-2-[[(3,5-dimethylphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-82-3 HCAPLUS CN Phenol, 4-amino-2-[[(2-ethylphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-83-4 HCAPLUS CN Phenol, 4-amino-2-[[(3-ethylphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-84-5 HCAPLUS CN Phenol, 4-amino-2-[(3-pyridinylamino)methyl]- (9CI) (CA INDEX NAME)

RN 402940-85-6 HCAPLUS CN Phenol, 4-amino-5-methyl-2-[(phenylamino)methyl]- (9CI) (CA INDEX NAME)

RN 402940-86-7 HCAPLUS

CN Phenol, 4-amino-5-methoxy-2-[(phenylamino)methyl]- (9CI) (CA INDEX NAME)

MeO

RN 402940-87-8 HCAPLUS

CN Phenol, 4-amino-5-chloro-2-[(phenylamino)methyl]- (9CI) (CA INDEX NAME)

RN 402940-88-9 HCAPLUS

CN Phenol, 4-amino-2-[[(2-fluorophenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-89-0 HCAPLUS

CN Phenol, 4-amino-2-[[(2-hydroxyphenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-90-3 HCAPLUS

CN Phenol, 4-amino-2-[[(2-aminophenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-91-4 HCAPLUS
CN Phenol, 4-amino-2-[[[2-(trifluoromethyl)phenyl]amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-92-5 HCAPLUS
CN Phenol, 4-amino-2-[[[2-(trifluoromethoxy)phenyl]amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-93-6 HCAPLUS
CN Benzonitrile, 2-[[(5-amino-2-hydroxyphenyl)methyl]amino]- (9CI) (CA INDEX NAME)

RN 402940-94-7 HCAPLUS
CN Benzonitrile, 4-[[(5-amino-2-hydroxyphenyl)methyl]amino]- (9CI) (CA INDEX NAME)

RN 402940-95-8 HCAPLUS

CN 1,2-Benzenediol, 4-[[(5-amino-2-hydroxyphenyl)methyl]amino]- (9CI) (CAINDEX NAME)

$$CH_2-NH$$
 OH
 OH
 OH
 OH

RN 402940-96-9 HCAPLUS

CN Phenol, 4-amino-2-[[(4-aminophenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-97-0 HCAPLUS

CN Phenol, 4-amino-2-[[(4-chlorophenyl)amino]methyl]- (9CI) (CA INDEX NAME)

RN 402940-98-1 HCAPLUS

CN Phenol, 4-amino-2-[[[4-(trifluoromethoxy)phenyl]amino]methyl]- (9CI) (CA INDEX NAME)

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ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN
     2000:209676 HCAPLUS
ΑN
DN
     132:238364
     Cationic 4-hydroxyindoles and their use in oxidative dyeing of hair
ΤI
     Terranova, Eric; Lagrange, Alain; Fadli, Aziz
IN
PA
     L'oreal, Fr.
SO
     Eur. Pat. Appl., 17 pp.
     CODEN: EPXXDW
ידת
     Patent
     French
LΑ
     ICM C07D401-06
IC
     ICS A61K007-13; C07D401-14; C07D209-14; C07D209-42
CC
     41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic
     Sensitizers)
     Section cross-reference(s): 28, 62
FAN.CNT 1
                                            APPLICATION NO.
     PATENT NO.
                      KIND DATE
                                            _____
                                            EP 1999-402147
                                                             19990830
     EP 989128
                            20000329
PΙ
                       A1
                            20010321
     EP 989128
                       В1
            AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     FR 2783520
                       Α1
                            20000324
                                            FR 1998-11751
                                                             19980921
     FR 2783520
                       В1
                            20001110
     AT 199904
                       Ε
                            20010415
                                            AT 1999-402147
                                                             19990830
                       Т3
                            20010816
                                            ES 1999-402147
                                                             19990830
     ES 2157683
                                            ZA 1999-5770
                                                             19990908
     ZA 9905770
                       Α
                            20000329
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     AU 9947551
                       Α1
                            20000406
                                                             19990913
     AU 719623
                       B2
                            20000511
                            20001031
     MX 9908445
                       Α
                                           MX 1999-8445
                                                             19990914
     BR 9904652
                                            BR 1999-4652
                       Α
                            20001114
                                                             19990917
                                            CN 1999-120324
                                                             19990920
     CN 1248577
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                            20000329
                            20000425
                                            KR 1999-40444
                                                             19990920
     KR 2000023311
                       Ά
     JP 2000136189
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                                           RU 1999-120693
                                                             19990920
                                            JP 2002-87653
                                                             19990920
     JP 2002308871
                       A2
                            20021023
                                            US 1999-400818
                                                             19990921
     US 6306181
                       В1
                            20011023
     US 2002032937
                       A1
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                                            US 2001-925010
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     US 2003019050
                       Α9
                            20030130
     US 6528650
                       B2
                            20030304 -
PRAI FR 1998-11751
                            19980921
                       Α
     JP 1999-265221
                       A3
                            19990920
     US 1999-400818
                            19990921
                       Α1
     MARPAT 132:238364
OS
GΙ
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AB Cationic derivs. of the 4-hydroxyindoles (I; R1 = cationic group, optionally substituted alkyl; R2, R3 = H, halogen, cationic group, alkyl, carboxy, alkoxycarbonyl, formyl; R4, R5 = H, halogen, cationic group, alkyl, alkoxy, acetyalmino, substituted alkyl, thiophenyl, furanyl, optionally substituted Ph or aralkyl) are combined with oxidative bases (couplers) in the form of arom. amines or phenols to provide oxidative hair dyes. The dyes have improved fastness and application properties. In an example, in 2-methyl-2-propanol, 3-pyridinecarboxaldehyde was condensed with 1-methyl-1,5,6,7-tetrahydro-4-indolone to give 1-methyl-5-(3-pyridylmethyl)-1H-indol-4-ol, which was then quaternized to give the methosulfate. This compd. could then be combined with 2-(.beta.-acetamidoethoxy)-p-phenylenediamine to give a blue hair dye.

IT Hair preparations

IT

(dyes, oxidative; hydroxyindole cationic derivs. for use in oxidative hair dyes)

90-15-3, 1-Naphthol 92-65-9 93-05-0, N,N-Diethyl-1,4-phenylenediamine 95-55-6, 2-Aminophenol 95-70-5, 2-Methyl-1, 4-phenylenediamine 4-Chloro-1,3-dihydroxybenzene 99-98-9, N,N-Dimethyl-1,4-phenylenediamine 101-54-2 106-50-3, 1,4-Benzenediamine, uses 108-45-2, 1,3-Benzenediamine, uses 108-46-3, 1,3-Benzenediol, uses 123-30-8, 399-95-1, 4-Amino-3-fluorophenol 399-96-2, 591-27-5, 3-Aminophenol 608-25-3, 1,3-Dihydroxy-2-methylbenzene 2-Chloro-1,4-phenylenediamine 1630-11-1, 2,6-Diethyl-1,4phenylenediamine 2359-53-7 2380-86-1, 6-Hydroxyindole 2359-52-6 2380-94-1, 4-Hydroxyindole 2835-95-2, 5-Amino-2-methylphenol 2835-96-3, 4-Amino-2-methylphenol 2835-98-5, 2-Amino-5-methylphenol 4664-16-8, 2,6-Dihydroxy-4-2835-99-6, 4-Amino-3-methylphenol 4770-37-0, 6-Hydroxyindoline 5306-96-7, methylpyridine 2,3-Dimethyl-1,4-phenylenediamine 5862-80-6 6393-01-7, 2,5-Dimethyl-1,4-phenylenediamine 7218-02-2, 2,6-Dimethyl-1,4-7556-37-8, 4-Hydroxy-1-methylindole 7575-35-1 phenylenediamine 17672-22-9, 2-Amino-6-methylphenol 29785-47-5, 4-Amino-2-(methoxymethyl)phenol 55302-96-0 63969-43-7 70643-19-5 73793-80-3 **79352-72-0**, 4-Amino-2-(aminomethyl)phenol 83763-47-7 81892-72-0 93841-24-8 97902-52-8 104333-09-7, 4-Amino-2-(hydroxymethyl)phenol 105293-89-8, N,N-Dipropyl-1,4phenylenediamine 105607-68-9 **110952-46-0** 126335-43-1 128729-30-6 129697-50-3, 5-Acetamido-2-aminophenol 130582-53-5 135855-35-5 157587-61-6 168202-61-7, 135855-34-4 232284-09-2 4-Amino-3-(hydroxymethyl)phenol 207568-58-9 232284-14-9 262285-68-7

RL: TEM (Technical or engineered material use); USES (Uses) (coupler with hydroxyindole cationic derivs. for use in oxidative hair dyes) 262285-26-7P ΙT RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (hydroxyindole cationic derivs. for use in oxidative hair dyes) 262285-36-9 262285-32-5 262285-34-7 ΙT 262285-28-9 262285-30-3 262285-47-2 262285-49-4 262285-45-0 262285-39-2 262285-42-7 262285-57-4 262285-59-6 262285-55-2 262285-51-8 262285-53-0 262285-66-5 262285-67-6 262285-63-2 262285-65-4 262285-61-0 RL: TEM (Technical or engineered material use); USES (Uses) (hydroxyindole cationic derivs. for use in oxidative hair dyes) ΙT 131628-57-4P RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent) (intermediate; prepn. of hydroxyindole cationic derivs. for use in oxidative hair dyes) 77-78-1, Dimethyl sulfate TΤ RL: RCT (Reactant); RACT (Reactant or reagent) (quaternizing agent; prepn. of hydroxyindole cationic derivs. for use in oxidative hair dyes) 500-22-1, 3-Pyridinecarboxaldehyde ΤТ 51471-08-0 RL: RCT (Reactant); RACT (Reactant or reagent) (starting material; prepn. of hydroxyindole cationic derivs. for use in oxidative hair dyes) THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT 4 (1) L'Oreal; EP 0428441 A 1991 HCAPLUS (2) L'Oreal; EP 0446131 A 1991 HCAPLUS (3) L'Oreal; EP 0850638 A 1998 HCAPLUS (4) L'Oreal Sa; FR 2736640 A 1997 HCAPLUS 79352-72-0, 4-Amino-2-(aminomethyl)phenol 110952-46-0 IT RL: TEM (Technical or engineered material use); USES (Uses) (coupler with hydroxyindole cationic derivs. for use in oxidative hair dyes) 79352-72-0 HCAPLUS RN

CN

RN 110952-46-0 HCAPLUS
CN Phenol, 4-amino-2-[[(2-hydroxyethyl)amino]methyl]- (9CI) (CA INDEX NAME)

Phenol, 4-amino-2-(aminomethyl)- (9CI) (CA INDEX NAME)

$$\operatorname{CH}_2$$
 CH_2 CH_2 CH_2 CH_2 CH_2 CH_2

L47 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1999:796126 HCAPLUS

DN 132:13105

TI Preparation of 2,4-diaminophenol-derivative oxidative dye intermediates and their use in hair dye formulations

IN Akram, Mustafa; Wolff, Wolfgang; Kleen, Astrid

PA Schwarzkopf G.m.b.H. Hans, Germany

SO Ger. Offen., 10 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM C07D309-06

ICS C07C217-82; C07C215-76; A61K007-13; D06P003-10

CC 41-9 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic

Sensitizers)
Section cross-reference(s): 27, 62

FAN.CNT 1

TAN. CNI I							
	PATENT NO. KI	IND DATE	APPLICATION NO.	DATE			
PI	DE 19826457	A1 19991216	DE 1998-19826457	19980613			
	WO 9965891 A	A1 19991223	WO 1999-EP3860	19990604			
	W: AU, BR, CA,	, CN, CZ, HU, J	JP, NO, PL, RU, SK, US,	VN			
	RW: AT, BE, CH,	, CY, DE, DK, E	ES, FI, FR, GB, GR, IE,	IT, LU, MC, NL,			
	PT, SE						
	AU 9945064 A	A1 20000105	AU 1999-45064	19990604			
PRAI	DE 1998-19826457 A	A 19980613					
	WO 1999-EP3860 W	v 19990604					
os	MARPAT 132:13105						
GI							

AB The title compds. [I; R1 = (CH2) nX; n = 2-4; X = satd. or unsatd. arom. 6-or 7-member ring contg up to 2 O or S or up to 3 N atoms, etc.; R2-R5 = H, (di)hydroxyalkyl, trihydroxyalkyl, (un)substituted aminoalkyl, haloalkyl; R6 = H, Me, Et, hydroxyalkyl, halogen; such that .gtoreq.1 of R1-R5 = H],

Ι

ELHILO 10/052322

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8/14/03 Page 43 useful as the oxidative dye coupling component for hair dye formulations, are prepd. and I-contg. hair dye formulations presented. Thus, 1-chloro-2,4-dinitrobenzene was reacted with 2-(hydroxymethyl) tetrahydropyran in the presence of aq. NaOH, the intermediate 1-(tetrahydropyran-2-ylmethoxy)-2,4-dinitrobenzene hydrogenated to the corresponding diamine, and salified with HCl(g), producing gray powd. 1-(tetrahydropyran-2-ylmethoxy)-2,4-diaminobenzene dihydrochloride (m.p. 154.degree.). diaminophenol prepn hair dye intermediate; oxidative dye prepn diaminophenol deriv Phenols, preparation Phenols, preparation RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (amino, 2,4-diaminophenol derivs.; prepn. of 2,4-diaminophenol-deriv. oxidative dye intermediates and their use in hair dye

formulations) IT Hair preparations

(dyes, oxidative, 2,4-diaminophenol derivs.; prepn. of 2,4-diaminophenol-deriv. oxidative dye intermediates and their use in hair dye formulations)

Amines, preparation TT Amines, preparation

RL: BUU (Biological use, unclassified); IMF (Industrial manufacture); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(phenolic, 2,4-diaminophenol derivs.; prepn. of 2,4-diaminophenolderiv. oxidative dye intermediates and their use in hair dye formulations)

IT Hair

(prepn. of 2,4-diaminophenol-deriv. oxidative dye intermediates and their use in hair dye formulations)

83-56-7, 1,5-Dihydroxynaphthalene 90-15-3, 1-Naphthol IΤ 95-88-5, 4-Chloro-1,3-dihydroxybenzene 2-Aminophenol 95-70-5 106-50-3, 1,4-Benzenediamine, reactions 108-46-3, 1,3-Benzenediol, 123-30-8, p-Aminophenol 488-87-9, 2,5-Dimethylresorcinol reactions 504-15-4, 5-Methylresorcinol 575-38-2, 1,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 582-17-2, 2,7-Dihydroxynaphthalene 1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7, 2-Methylresorcinol 4-Hydroxy-2,5,6-triaminopyrimidine 2835-95-2, 5-Amino-2-methylphenol 2835-99-6, 4-Amino-3-methylphenol 6201-65-6, 2-Chlororesorcinol 22715-34-0, 7575-35-1, N,N-Bis(2-hydroxyethyl)-p-phenylenediamine 63969-46-0 **79352-72-0**, 2-Hydroxy-4,5,6-triaminopyrimidine 84540-50-1, 3-Amino-2-chloro-6-methylphenol 2-Aminomethyl-4-aminophenol 93841-24-8, 2-(2,5-Diaminophenyl)ethanol 155601-17-5, 4,5-Diamino-1-(2-hydroxyethyl)pyrazole 251450-62-1 RL: RCT (Reactant); RACT (Reactant or reagent) (developing component; prepn. of 2,4-diaminophenol-deriv.

oxidative dye intermediates and their use in hair dye formulations)

106774-37-2P 251457-86-0P TΤ

RL: BUU (Biological use, unclassified); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(prepn. of 2,4-diaminophenol-deriv. oxidative dye intermediates

and their use in hair dye formulations)

IT 97-00-7, 1-Chloro-2,4-dinitrobenzene 100-72-1, 2-

(Hydroxymethyl) tetrahydropyran

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. of 2,4-diaminophenol-deriv. oxidative dye intermediates and their use in hair dye formulations)

IT 73839-69-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

Page 44

(prepn. of 2,4-diaminophenol-deriv. oxidative dye intermediates and their use in hair dye formulations)

IT 79352-72-0, 2-Aminomethyl-4-aminophenol

RL: RCT (Reactant); RACT (Reactant or reagent)

(developing component; prepn. of 2,4-diaminophenol-deriv.

oxidative dye intermediates and their use

in hair dye formulations)

RN 79352-72-0 HCAPLUS

CN Phenol, 4-amino-2-(aminomethyl)- (9CI) (CA INDEX NAME)

L47 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2003 ACS on STN

AN 1999:761015 HCAPLUS

DN 132:6218

TI Oxidative hair dye compositions containing 1-(4-aminophenyl)-2-pyrrolidinemethanols

IN Lim, Mu-Ill; Popp, Margaret; Pan, Yuh-Guo

PA Bristol-Myers Squibb Company, USA

SO U.S., 11 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM A61K007-13

NCL 008409000

CC 62-3 (Essential Oils and Cosmetics)

Section cross-reference(s): 34

FAN.CNT 1

L7mv.	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5993491	A	19991130	US 1998-78264	19980513
	JP 11349564 EP 962452	A2 A1	19991221 19991208	JP 1999-128536 EP 1999-201486	19990510 19990512
				GB, GR, IT, LI, LU	
	•		, FI, RO		10000710
ррат	MX 9904400 US 1998-78264	A a	20000331 19980513	MX 1999-4400	19990512
os	MARPAT 132:6218		19900313		

AB Compns. for the oxidative coloring of human hair contain as a novel

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primary dye intermediate a 1-(4-aminophenyl)-2pyrrolidinemethanol, or a cosmetically acceptable salt. The compns. may also contain at least 1 other primary intermediate and conventional coupling compds., in addn. to an oxidizing agent and other components typically used in oxidative hair dye prepns. A preferred dye intermediate in the compn. is (S)-1-(4-aminophenyl)-2pyrrolidinemethanol (I) or cosmetically acceptable salts, which produce intense black colors when used in admixt. with a suitable coupling agents, such as 3-aminophenol, in conventional hair dye base formulations. Thus, 1-fluoro-4-nitrobenzene was treated with (S)-(+)-2-pyrrolidinemethanol and K2CO3 in DMF, and the resulting product was hydrogenated in the presence of 10% Pd on carbon in EtOH soln. to give I. Cocamidopropyl betaine 17, ethanolamine 2, oleic Acid 0.75, citric Acid 0.1, NH4OH 5.0, behentrimonium chloride 0.5, na2SO3 0.1, EDTA 0.1, I 5 mmole, a coupler (e.g., 3-aminophénol) 5 mmole and water qs to 100%. The above compn. was mixed with 100 g of 20 vol. H2O2 and the mixt. was applied to piedmont hair or gray hair and permitted to remain in contact with hair for 30 min. Thus dyed hair was then shampooed and rinsed with water and dried. oxidative hair dye aminophenylpyrrolidinemethanol prepn; pyrrolidinemethanol aminophenyl oxidative hair dye prepn Hair preparations (dyes, oxidative; oxidative hair dye compns. contg. (aminophenyl)pyrrolidinemethanols) Coupling agents Oxidizing agents (oxidative hair dye compns. contg. (aminophenyl)pyrrolidinemethanols) 89-25-8, 3-Methyl-1-phenyl-2-pyrazolin-5-one <math>90-15-3, 1-Naphthol95-86-3, 95-70-5, p-Toluenediamine 95-55-6, o-Aminophenol 2,4-Diaminophenol 106-50-3, 1,4-Benzenediamine, biological studies 108-45-2D, 1,3-Benzenediamine, derivs., biological studies 1,3-Benzenediol, biological studies 108-46-3D, Resorcinol, derivs. 108-95-2D, Phenol, derivs., biological studies 123-30-8, p-Aminophenol 123-30-8D, p-Aminophenol, derivs. 150-75-4, p-MethylAminophenol 591-27-5D, derivs. 608-25-3, 2-MethylResorcinol 2835-95-2, 2-Hydroxy-4-aminotoluene 2835-96-3, 2-Methyl-p-Aminophenol 2835-98-5, 5-Methyl-o-aminophenol 2835-99-6, 3-Methyl-p-Aminophenol 7469-77-4, 2-Methyl-1-Naphthol 7575-35-1 16867-03-1, 2-Amino-3-hydroxypyridine 17672-22-9, 6-Methyl-o-aminophenol 19298-14-7, 2-Hydroxyethyl-p-29785-47-5, 2-Methoxymethyl-p-Aminophenol Phenylenediamine 70643-19-5, 2-(2,4-Diaminophenoxy)ethanol 110952-46-0 251108-64-2 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (oxidative hair dye compns. contg. (aminophenyl)pyrrolidinemethanols) 251108-62-0P 251108-70-0P 132041-37-3P 251108-60-8P RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (oxidative hair dye compns. contg. (aminophenyl)pyrrolidinemethanols) 7722-84-1, Hydrogen peroxide, uses RL: CAT (Catalyst use); USES (Uses) (oxidative hair dye compns. contg. (aminophenyl)pyrrolidinemethanols) 51-35-4, trans-4-Hydroxy-L-proline 350-46-9, 1-Fluoro-4-nitrobenzene 23356-96-9, (S)-(+)-2-PyrrolidinemethanolRL: RCT (Reactant); RACT (Reactant or reagent) (oxidative hair dye compns. contg. (aminophenyl)pyrrolidinemethanols) 251108-59-5P 88422-19-9P 129297-51-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

ELHILO 10/052322 8/14/03

Page 46

(oxidative hair dye compns. contg. (aminophenyl)pyrrolidinemethanols) THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD RE.CNT RE (1) Andousset; US 5538516 1996 HCAPLUS (2) Anon; GB 2239265 1991 HCAPLUS (3) Anon; JP 05-188549 1993 HCAPLUS (4) Anon; JP 05-197107 1993 HCAPLUS (5) Anon; EP 0634163 1995 HCAPLUS (6) Bent, R; J Am Chem Soc 1951, V73, P3100 HCAPLUS (7) Ohki; US 5278034 1994 HCAPLUS IT110952-46-0 RI: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (oxidative hair dye compns. contg. (aminophenyl)pyrrolidinemethanols)

Phenol, 4-amino-2-[[(2-hydroxyethyl)amino]methyl]- (9CI) (CA INDEX NAME)

NH₂
CH₂-NH-CH₂-CH₂-OH

110952-46-0 HCAPLUS

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OH